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ABSTRACT

The 1981 Nutrition and Education Training Program described in this report is a continuation of activities begun in 1979 in the Baltimore, Maryland public schools. In 1981, the project integrated the objectives and learning activities developed during 1979 and 1980 into elementary and secondary education health, home economics, and science curriculum guides; held curriculum implementation workshops for secondary teachers of those subjects; implemented an accredited inservice course on an interdisciplinary approach to teaching nutrition to elementary and secondary school students for teachers and cafeteria managers; and provided community nutrition information dissemination workshops. Evaluation of the project involved pretesting and posttesting of teachers who participated in training; field testing of the curriculum guides by selected teachers who had received training; pretesting and posttesting of students in the tryout classes; and surveys of teachers' and students' nutrition opinions and food attitudes. Findings indicated that in general, teachers found the guides helpful. Some teachers identified specific problems in the use of the guides. Teachers demonstrated few overall changes in knowledge from pretest to posttest, while students indicated a need for more work in all areas. Pretest to posttest changes in nutrition opinions and food attitudes were found. Recommendations for improving the guides are presented. (Author/MJL)

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Public Law 95-166

EVALUATION REPORT

NUTRITION EDUCATION

and

TRAINING PROGRAM

DIVISION OF VOCATIONAL EDUCATION
Office of Home Economics

Baltimore City Public Schools

June 1982

UD 022 507

ANNUAL EVALUATION REPORT

NUTRITION EDUCATION & TRAINING PROJECT

II TITLE PAGE

A. Name of Project: Baltimore City Public Schools
Nutrition Education and Training Project

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D. Time Period of Report: September 1, 1981 - June 30, 1982

E. Date Report is Submitted: June 30, 1982

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H. Assurance Statement: An Equal Opportunity Program. The Nutrition Education and Training Program of the U.S. Department of Agriculture is available to all individuals regardless of race, color, national origin, age, sex or handicap. Persons who believe they have been denied equal opportunity for participation, may write to the Secretary of Agriculture, Washington, DC 20250.

BALTIMORE CITY PUBLIC SCHOOLS
Nutrition Education and Training Project
Evaluation Guidance

III Executive Summary

A. INTRODUCTION AND BACKGROUND

The Baltimore City Public Schools fiscal year 1981 Nutrition Education and Training (NET) Project was designed to expand the elementary staff development efforts begun with the fiscal year 1979 grant and to complete the development and evaluation of curricula begun in the fiscal year 1979 and 1980 grants.

It was anticipated that this two-fold focus would allow for outreach to a greater percentage of the target population while maintaining the knowledge, attitude, and behavioral gains evidenced during the first two (2) years. The curricular and training components were deemed essential to the continuation of the NET advances in the event of funding termination.

B. OBJECTIVES

The following objectives, outlined in the project proposal, are prioritized:

1. In cooperation with subject area coordinators, to publish the objectives and learning activities developed during the fiscal years 1979 and 1980 projects as an integral component of the curriculum guides of health, home economics, and science.

2. To hold curriculum implementation workshops for secondary teachers of home economics, health, and science.

3. To implement the accredited inservice course, "An Interdisciplinary Approach to Teaching Nutrition K-12," developed as a part of the fiscal year 1980 project.

4. To expand staff development programs on nutrition with the instructional and school food services staff in individual elementary schools in the city.

5. To continue to develop and implement one or two regional training sessions for all cafeteria managers in the school system. These training programs will be designed to:

   a. Strengthen and expand existing nutrition knowledge.

   b. Promote a coordinated program of activities.

   c. Introduce learning packages for managers to use in the classroom.

6. To continue parent/community nutrition programs that are designed to disseminate information and to promote the nutrition efforts of the schools.

C. PROJECT EVALUATION DESIGN

A field study was conducted to investigate the effects of project intervention on the nutrition knowledge, attitudes, and behaviors of teachers and students in the pilot schools. A Pre-Test Post-Test Within Group Design was utilized with secondary students.

Other evaluation design features of the secondary components included both summative and formative assessment techniques. Many of these were informal: data included verbal and written feedback from various school and central office personnel, and/or personal reactions to school visits. More formal devices included analysis of activity logs, curriculum evaluation forms and workshop evaluation sheets.

Stringent evaluation of the elementary component was not considered essential as it was a continuation of the modus operandi utilized and evaluated by the FY '78 grant.

D. MEASUREMENT OF OBJECTIVES

The evaluation of the fiscal year 1979 project focused on the content and appropriateness of the nutrition units being developed for secondary students. The fiscal year 1981 NET Project concentrated on field testing the curricula

in the classroom and summative evaluation of the knowledge, attitudes, and behavior of the school children and faculty exposed to the various curricula.

Curriculum evaluation forms, and activity logs were maintained by all workshop participants. These were analyzed in an effort to evaluate the nutrition units: student acceptance; reading level; style and classroom management.

The Nutrition Opinions Survey and Knowledge Tests (pre and post) developed by the Prince George's County Public Schools' NET Project were administered to all workshop participants and one classroom of students for each of these teachers. The tests were scored by the Baltimore City Public Schools Data Center and analyzed by the NET Project Facilitator and the Office of Testing and Evaluation.

E. TARGET GROUPS

The target groups within the city schools included:

1. Teachers of science and home economics in each of the junior/middle schools.
2. Teachers of Survival Skills I (Health Education) in each of the high schools.
3. Secondary Students.
4. The instructional staff, students, and parent groups within elementary schools.
5. Cafeteria Managers.

F. INSTRUMENTATION/PRODUCT DEVELOPMENT

1. Curriculum Development. In close cooperation with each subject area office, the following steps were undertaken in the development of the nutrition curriculum guides for 7th grade home economics, 7th grade science, and Survival Skills I (10th grade).

a. Review nutrition components of the BCPS' health, home economics and science curriculum guides.

b. Two day training sessions held at Notre Dame College for selected teachers from each discipline.

c. Individual curriculum writing sessions with trained teachers.

d. Review and refinement of lessons by project staff and subject area office.

e. New guides printed.

f. Implementation workshops planned and held.

g. Units taught by field test teachers.

h. Results of testing compiled and analyzed.

2. Assessment devices. Evaluation instruments used by the project included:

a. Nutrition Opinions Survey and Cognitive Pre and Post Tests. Developed and evaluated for validity and reliability by the Prince George's County Public Schools' NET Project.

b. Learning Packet Evaluation Forms. Developed by the Project Facilitator and reviewed by each of the subject area coordinators.

c. Activity Logs. Logs developed and field tested by the fiscal year 1978 NET Project and revised by the fiscal year 1979 Project.

G. PROCEDURES

1. Secondary Component. Three curriculum implementation programs were planned by the NET Project Facilitator and subject area Coordinators. The content of each workshop was based on curricular content and assessed needs. Each Coordinator identified one teacher from each of the appropriate secondary schools to receive training. The health teachers were selected from each high school. Home Economics and Science teachers were chosen from each middle/junior high school. In addition, the Coordinator of Science was able to have a representative from many high schools released for participation.

Teachers attending the health education and home economics implementation workshops were administered the Nutrition Opinions Survey and Cognitive Pre-Test. Due to a problem encountered by the NET Project Facilitator, the science teachers were not pre-tested. A total of 36 teachers were pre-tested and 77 post-tested.

At the completion of training, teachers were to teach the appropriate unit and gather data on student achievement. The number of actual field test teachers was determined by the subject area coordinators and the NET Project Facilitator. Teachers of health were involved in field testing two units at one time: nutrition and environmental cancer. While one teacher from each high school was trained, only 6 out of the 21 teachers were involved in field testing the nutrition unit. Home Economics teachers exempted from student testing were those who had taught nutrition at the beginning of the year, or those where school programming made it impossible to participate. Fourteen out of the 25 attending were involved in data collection. The number of science teachers involved in the evaluation of the science unit was determined by the availability of the teacher to teach nutrition during a prescribed time period. Eighteen middle/junior high teachers attended, and seven participated in the curriculum evaluation.

Specified dates were established for the pre-testing and post-testing of students in each discipline. Tests were sent through the inter-office mail to be administered by the teacher. Tests were returned to the project office where they were matched, cleaned, and subsequently delivered to the BCPS' Data Center for scanning and scoring. The units were taught during prescribed time periods and the students were post-tested. A total of 519 students were pre-tested, and 502 post-tested. Analysis of the data was the cooperative efforts of the Project Facilitator and the Office of Testing and Evaluation.

2. Elementary Component. Participating schools and parent/community groups were selected from requests made by school administrators in response to a circular describing NET services. This circular was disseminated throughout the city school system in October 1981.

The extent of staff development within individual schools was determined by the availability of time on the school's inservice calendar. Each workshop session stressed coordination of efforts among teachers, cafeteria staff, and parents, as well as, an interdisciplinary instructional approach. Activity logs were given to each person trained after the first staff development program along with directions for its use. These were returned to the NET office, coded, and analyzed.

3. Inservice Course. The course, "Teaching Nutrition K-12: An Interdisciplinary Approach" was advertised in the Baltimore City Public Schools' Staff Newsletter published in September 1981 and again in February 1982. Approval from the Maryland State Department of Education for 2 inservice credits, Towson State University for 2 graduate credits, and the American School Food Service Association for 13 credits for cafeteria managers were sought last year.

Teachers and cafeteria managers were accepted on a "first come, first serve" basis. The Opinion Survey and Knowledge Test was administered on the first night of class and again on the last. Activity logs and evaluation sheets were also maintained by each participant.

4. Cafeteria Managers. A compendium of "Lessons for the Cafeteria" was developed in cooperation with the Maryland State Department of Education and NET projects across the state. This guide was duplicated for use in the inservice course and training of managers on a system wide basis. Several meetings with the School Food Service Division of the Baltimore City Public Schools were held

prior to this printing to discuss the feasibility and need for training. Letters were written by the NET Project Facilitator at the completion of the guide to set up training programs. No replies were received.

5. Outreach to all target groups. Activities beyond the scope of the project proposal were conducted by the NET Project in an effort to extend the program's goals and objectives throughout the school system. These included:

a. Production of a newsletter which was disseminated to every NET participant over the past three (3) years. The newsletter included information and instructional activities designed for National Nutrition Month, National School Breakfast Week, and National Dental Health Month.

b. Dissemination of Circular No. 215. This circular encouraged participation in the "Nutrific Fitness Event" sponsored by the Maryland Dietetic Association.

c. Display at the Home Economics Fair in Hopkins Plaza.

d. Workshop session for teachers of social studies and science. This was a part of the Maryland State Department of Education's Contemporary Issues program.

e. Professional development program for home economics teachers.

H. DATA SOURCES

1. Nutrition Opinions Survey and Cognitive Pre-Test and Post-Tests. Computer results of all testing.

2. Activity Logs.

3. Workshop Evaluation Forms.

4. Learning Packet Evaluation Forms.

5. Attendance Records for all training programs.

6. Circulars.

7. Printed Curriculum Guides.

8. Memos and Correspondence.

9. Staff Newsletter.

10. NET Newsletter.

I. RESULTS OF THE NET EVALUATION

1. Curriculum Guide Evaluations - Field Testing.

Home Economics. The following results were compiled from the "Overall Learning Packet Evaluation" forms:

Features	Excellent	Good	Fair	Poor
Directions	60%	40%		
Activities	60%	27%	13%	
Content for Students	47%	47%	6%	
Style	47%	47%	6%	
Student Acceptance	20%	47%	33%	
Student Achievement	7%	60%	33%	
Overall Evaluation	40%	47%	12%	

Overwhelmingly teachers responded that they would definitely use the guide again and that it had been extremely helpful. Several teachers noted that they were sharing the guide with science teachers and "others" at their schools.

Seventy three (73%) percent of the field test teachers did not feel that the guide had any shortcomings. The remaining 27% indicated that a large percentage of their students were classified DEC. The following problems need to be address for this group of students:

-Rework the lesson "What's Nutritious." It is far too complex.

-Rewrite the readings on a lower level.

-Deal with just "leader nutrients" or classes of nutrients. The difference is too confusing.

Some of the field-test teachers used the guide as a resource. A problem indicated by two teachers is applicable throughout the city system. The number of student readings and worksheets presents duplication problems.

Health Education. Analysis of the "Overall Learning Packet Evaluation" forms yielded the following results:

Features	Excellent	Good	Fair	Poor
Directions	84%	16%		
Activities	34%	66%		
Content for Students	34%	51%	15%	
Style		84%	16%	
Student Acceptance		50%	50%	
Student Achievement		66%	34%	
Overall Evaluation		100%		

All teachers reported that the guide was helpful, would be used again, and would be recommended to other teachers. Fifty percent (50%) of the field test teachers felt there were no short comings to the guide. One teacher had problems with the nutrition lessons which were integrated into other health units; i.e. aging, skin care, and cancer. The teacher reported that these lessons were too long and not specifically nutrition. Whereas one teacher felt that the guide contained too much nutrition at one time (4 main lessons), two others cited a desire for more information on such topics as fads, fast foods, and labeling.

Science. The following results were compiled from the "Overall Learning Packet Evaluation" forms:

Features	Excellent	Good	Fair	Poor
Directions		100%		
Activities	50%	20%	30%	
Content for Students		83%	17%	
Style		66%	33%	
Student Acceptance	17%	50%	33%	
Student Achievement	17%	66%	17%	
Overall Evaluation	17%	83%		

Teachers reported having used the guide, finding it helpful, and making plans to use the guide again. One third of the teachers indicated that the guide was used to supplement units they had developed.

Nearly one third of the teachers reported that they didn't have enough instructional materials to carry out some of the lessons. One teacher indicated that duplication of student worksheets was a problem due to lack of paper and fluid within the school. While the majority of teachers felt that the materials and lessons were appropriate to the 7th grade science curriculum, several requested further background information on the lesson on vitamins and minerals.

2. Results of the Cognitive Survey

Teachers. An analysis of the Nutrition Survey for Teachers yielded the following results:

a. There were few changes overall from the pre-test to the post-test period as indicated in table 1. Most people who answered correctly did so on both the pre and post tests.

b. Growth was noted with reference to the following:

-Recognition of the place absorption occurs (item #2).

-Recognition of nutrients important to the structure and function of cells during growth (item #6).

-Recognition of the type of information listed on food labels (item #19).

-Recognition of sources of vitamins A and C (item #23).

-Recognition of things which influence an infant's birth weight (item #24).

-Recognition of obesity as a major health problem (item #25).

-Recognition of mineral most often added to the water supply to prevent tooth decay (item #26).

c. The following items need more attention (either in terms of more teaching time or item clarification) since a number of the people who answered them correctly on the pre-test answered incorrectly on the post-test:

-Recognition of the order in which food passes through the digestive system (item #3).

-Recognition of foods low in fat (item #7).

-Recognition of a function of vitamin C (item #17).

An analysis of the results by discipline was also performed. The following statements summarize these findings:

a. Health teachers appeared to have difficulty with the following items as demonstrated by a less than 10% response rate on the post-test:

-Recognition of fat soluable vitamins (item #1).

-Recognition of the order in which food passes through the digestive system (item #3).

-Recognition of foods high in fat (item #7).

-Recognition of the mineral most often added to the water supply to prevent tooth decay (item #26).

-Recognition of the "sunshine" vitamin (item #28).

-Recognition of type of information listed on food labels (item #29).

-Recognition of portion of R.D.A. provided by Type A School Lunch (item #30).

b. Home Economics teachers had difficulty with the following items as demonstrated by less than a 40% correct response rate on both pre and post tests:

-Recognition of nutrients important to the structure and function of cells during growth (item #6).

-Recognition of foods high in fat (item #7).

-Recognition of factors which influence birth weight (item #24).

c. Science teachers were the smallest number tested, and were only involved in the post-testing. As a group they did very well (80% or better) with the exception of the following items:

-Recognition of foods high in fat (item #7).

-Recognition of the highest growth period for children (item #15).

-Recognition of factors which influence birth weight (item #24).

Nutrition Survey for Teachers

Percentage Correct Response Pre and Post Test
By Item and Discipline

Item Number	Total Group		Health		Home Economics		Science	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
1	44	25	41	7	20	77		100
2	53	95	55	98	14	85		80
3	56	21	55	4	57	77		80
4	97	100	100	100	93	100		100
5	83	100	86	100	79	100		100
6	39	87	41	98	36	38		80
7	33	14	36	6	29	38		40
8	100	100	100	100	100	100		100
9	44	95	36	100	57	85		60
10	86	99	77	100	100	92		100
11	86	100	77	100	100	100		100
12	53	27	41	92	71	92		80
13	100	100	100	100	100	100		100
14	100	97	100	100	100	92		80
15	69	23	73	92	64	85		40
16	94	97	95	93	93	92		100
17	44	22	45	7	43	69		80
18	100	100	100	100	100	100		100
19	78	97	82	100	71	92		80
20	97	99	95	100	100	100		80
21	92	99	100	98	79	100		100
22	92	99	91	100	93	100		80
23	56	92	55	98	57	69		80
24	44	82	55	95	29	38		40
25	89	97	86	98	93	92		100
26	86	27	86	7	86	92		100
27	89	96	91	98	85	85		100
28	56	19	59	5	50	69		60
29	44	18	36	5	57	62		60
30	78	25	86	7	64	77		100
N=	36	77	22	59	14	13		5

Table 2

Nutrition Survey for Students

Mean Percentage Correct Response

Pre and Post Test

By White House Conference Concept and Discipline

	Total		Health		Home Economics		Science	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post
I. Nutrition: Effect of Food on Energy, Growth, and Health	45%	49%	52%	61%	27%	47%	42%	60%
Pre-Test: Nos. 3, 9, 10, 11, 17, 20, 21, 22, 25 Post-Test: Nos. 5, 6, 9, 10, 25, 26, 27, 28								
II. Nutrients: Their Relationship to Health	43%	49%	47%	57%	34%	34%	49%	51%
Pre-Test: Nos. 2, 5, 6, 7, 8, 12, 15, 16, 18, 24, 26, 28, 29 Post-Test: Nos. 2, 3, 4, 8, 11, 13, 14, 15, 16, 18, 22, 23								
III. Food Handling: Its Effect on Health & Food Quality	36%	40%	40%	54%	31%	27%	47%	50%
Pre-Test: 1, 27 Post-Test: Nos. 1, 20								
IV. The Life Cycle: Its Effect on Nutrition Needs	67%	52%	58%	57%	43%	39%	55%	61%
Pre-Test: Nos. 4, 23, 30 Post-Test: Nos. 12, 24, 29, 30								
V. Social/Psychological Needs	11%	57%	12%	69%	12%	25%	10%	65%
Pre-Test: Nos. 13, 19 Post-Test: Nos. 7, 17, 19								
VI. Food Technology								
VII. Nutrition and Society	44%	30%	42%	35%	34%	25%	45%	30%
Pre-Test: Nos. 14 Post-Test: Nos. 21								
N=	519	502	147	117	182	185	190	200

Both the Nutrition Survey for students and for teachers were tests developed and standardized by the Prince George's County Public Schools. Individual L.E.A. and subject area curricular content will account for variations in test results. For example, the Baltimore City Public Schools' Health Education curriculum centers on preventative nutrition as it relates to cancer, heart disease, acne, aging, drug interactions, etc. Very little of this content was covered in the test itself, whereas the curriculum implementation workshop focused on developing expertise in these areas.

Students. Students were given different items on the pre and post-tests, and although the forms were equivalent, a direct item to item match could not be made. The tests were therefore analyzed by concepts. (See Table 2.)

The following summarizes this analysis:

a. More work is needed in all areas. On the average students were answering less than 50% of the items correctly.

b. Questions involving food fads were most consistently wrong indicating the strong influence of peer information.

c. Home Economics' students did not do as well as Health or Science students but this might be attributed to a large number of DEC students in this population.

The cognitive test used gives only an indication of growth. As the various curriculum guides were designed to alleviate gaps and overlaps in nutrition instruction, it is not anticipated that students from each discipline will score similarly. Rather, the important evaluative criteria is whether a student having taken each required course will graduate with a full understanding of major nutritional concepts.

It is even more difficult to make statements regarding the nutrition knowledge of students as they relate to specific concepts. No questions on the test dealt with the concept of Food Technology. Only one test item on the

pre-test and one on the post-test could be considered appropriate to the concept of Nutrition and Society. Since they were not identical questions, it is possible that the item on the post-test was more difficult than the pre-test question. This might account for the apparent decrease in knowledge evidenced on the post-test.

3. Results of the Nutrition Opinions Survey

A Chi Square analysis was performed on the opinions portion of the test data. In most instances a statistically significant difference was noted between the pre-test and post-test periods. However, phi values and percentage differences were often low. Thus the significance may be a function of population size rather than a reflection of true differences in opinions. Results may also have been influenced, in some instances, by the large percentages of persons not responding to various items. The reasons for non-response cannot be determined from the existing data. Chi Square values were not affected by the percentage of non-responders as the analysis was performed on the students answering each item.

Tables 3 and 4, "Changes in Nutrition Opinions between Pre-Test and Post-Test," summarizes the findings for adults and students. The percentages quoted are based on the number of students responding to individual items.

4. Analysis of Nutrition Behaviors of Teachers

A total of 35 evaluation forms returned from the various workshops indicated that teachers made the following changes in their eating habits:

a. 40% of the participants returning forms cut down on sodium intake; noteably salt use.

b. 33% reported decreasing the amount of sugar in their diets.

c. 40% cut down on fat intake and/or meat in the diet.

d. 20% reported using more dairy products.

e. 15% reported including more high fiber foods.

5. Results of the Food Attitude Survey

Tables number 5 and 6 summarize the responses to the food preference section of the test for teachers and students. Chi Square analysis of the data yielded the following results:

Teachers

a. For 15 of the 30 foods listed, no statistically significant change in preference was noted. A visual review, however, indicates that teachers were more willing to taste foods after instruction.

b. Statistical significance was noted with two foods where little actual difference existed. For hamburger and broccoli the majority opinion on the pre-test and post-test remained the same with less than a 5% difference. Any differences are probably a function of the non-responders on these two items.

c. Statistically significant positive changes in attitude occurred with 12 foods. A 20-40% increase was noted with: oatmeal, brown rice, bran muffins, banana nut breads, popcorn, raw carrots, raw green peppers, split pea soup, baked beans, peanut butter, cottage cheese, and milk.

d. A statistically significant change was noted in a negative direction regarding the use of skim milk.

Students

a. In general, students exhibited very positive attitudes toward foods. The majority response was category A, "I like to eat (drink) it" in all but 6 cases. For five foods the majority response was category E, "I don't like it and I won't eat (drink) it." These foods were: raw green peppers, brown rice, skim milk, split pea soup, and cottage cheese.

b. Statistically significant changes were noted with all food choices. However, this is probably a function of population size and the percentage of non-responses. Small differences were generally in a positive direction. Only eight (8) foods were noted for a negative change -- all with less than 3% difference between pre-test and post-test.

c. A spread of more than 10% in a positive direction was noted for only five (5) foods: hamburger, cottage cheese, piece of cheese, plain popcorn, and banana nut bread.

Table 3

Changes in Nutrition Opinions

Between Pre-Test and Post-Test

ADULTS

	Question	Percent No Response Pre	Post	Majority Response* Pre	Post	Statistically Significant
1.	Sweet Foods Taste Better	0%	8%	D(64%)	D(97%)	**
2.	Meat More Important Than Bread	3%	8%	A(57%)	A(84%)	**
3.	Adding Salt Improves Taste	0%	5%	D(50%)	A(83%)	**
4.	Milk Gives Body Everything to Grow	0%	3%	D(75%)	D(89%)	**
5.	Like Between Meal Snacks	0%	4%	A(61%)	A(82%)	**
6.	Important to Take Daily Vitamins	3%	8%	D(71%)	D(77%)	**
7.	Skip Breakfast to Lose Weight	0%	8%	D(94%)	D(98%)	**
8.	Hard to Plan Balanced Meals	0%	8%	D(89%)	D(98%)	**
9.	Balanced Diet to Look & Feel Good	3%	8%	A(97%)	A(100%)	**
10.	Food Prep. Influences How Good For You	0%	8%	A(75%)	A(97%)	**
11.	Food on TV Ads Look So Good	0%	8%	A(72%)	A(92%)	**
12.	Like Grocery Shopping	0%	8%	A(58%)	A(88%)	**
13.	School Cafeteria Nice Place to Eat	0%	8%	D(71%)	D(85%)	**
14.	Better to Buy School Lunch	0%	8%	D(63%)	D(95%)	**
15.	Enjoy Eating Out With Friends	0%	8%	A(94%)	A(100%)	**
16.	Children/Adults Need Same Food	0%	0%	A(80%)	A(91%)	**

Opinions, Adults

	Question	Percent No Response Pre	Post	Majority Response* Pre	Post	Statistically Significant
.	Most Teens Do Not Eat Right	0%	0%	A(94%) U(3%)	A(90%) U(10%)	**
18.	Learning Nutrition Can Be Fun	0%	0%	A(94%)	A(92%)	**
19.	Some Unsafe Food Additives	0%	0%	A(89%)	A(91%)	**
20.	Some People Do Not Get Enough To Eat	0%	0%	A(92%)	A(91%)	**

* Percentages are computed on the number of persons responding to the item.
A -- Includes "Agree" and "Strongly Agree" responses.
U -- Includes "Not Sure" responses.
D -- Includes "Disagree" and "Strongly Disagree" responses.
** Indicates statistical significance was shown by chi square values.

Table 4

Changes in Nutrition Opinions

Between Pre-Test and Post-Test

STUDENTS

	Question	Percent No Response Pre	Post	Majority Response* Pre	Post	Statistically Significant
1.	Sweet Foods Taste Better	2%	0%	Equal Distribution	A(57%)	**
2.	Meat More Important Than Bread	8%	26%	A (50%)	A(47%) U(31%)	**
3.	Adding Salt Improves Taste	2%	21%	A (49%)	A(54%)	**
4.	Milk Gives Body Everything to Grow	3%	11%	D(46%)	D(44%)	**
5.	Like Between Meal Snacks	9%	15%	A(75%)	A(83%)	**
6.	Important to Take Vitamins	9%	26%	A(50%)	A(44%)	**
7.	Skip Breakfast to Lose Weight	9%	26%	D(70%)	D(71%)	**
8.	Hard to Plan Balanced Meals	9%	27%	D(48%) U(28%)	D(51%) U(26%)	**
9.	Balanced Diet to Look & Feel Good	6%	11%	A(71%)	A(71%)	**
10.	Food Prep. Influences How Good for You	6%	12%	A(59%) U(22%)	A(48%) U(29%)	**
11.	Food in TV Ads Look So Good	6%	12%	A(74%)	A(76%)	**
12.	Like Grocery Shopping	7%	13%	A(67%) U(13%)	A(66%) U(10%)	**
13.	School Cafeteria Nice Place to Eat	7%	15%	D(65%)	D(56%)	**
14.	Better to Buy School Lunch	7%	13%	D(73%)	D(70%)	**
15.	Enjoy Eating Out with Friends	10%	26%	A(80%)	A(83%)	**
16.	Children/Adults Need Same Foods	4%	20%	A(58%) D(16%)	A(48%) D(38%)	**

Opinions, Students

	Question	Percent No Response Pre	Post	Majority Response* Pre	Post	Statistically Significant
17.	Most Teens Do Not Eat Right	5%	.20%	A(72%)	A(82%)	**
18.	Learning Nutrition Can Be Fun	5%	27%	A(70%)	A(73%)	**
19.	Some Unsafe Food Additives	13%	26%	A(59%)	A(56%)	**
20.	Some People Do Not Get Enough To Eat	7%	.20%	A(80%)	A(87%)	**

*Percentages are computed on the number of persons responding to the item.
A -- Includes "Agree" and "Strongly Agree" responses.
U -- Includes "Not Sure" responses.
D -- Includes "Disagree" and "Strongly Disagree" responses.
**Indicates statistical significance was shown by chi square values.

Table 5

Results of Food Attitude Survey

Adults

Food	No Response		Percent of Persons Responding to Distractor										SStat.
			A		B		C		D		E		
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Sig.
Rst. Chicken	0	0	97	91	3	9	0	0	0	0	0	0	
Hamburger	0	7	83	91	17	1	0	0	0	1	0	0	*
Broiled Fish	0	0	81	90	17	10	3	0	0	0	0	0	
Tuna Fish	0	8	86	86	14	6	0	0	0	0	0	0	
Cooked Broccoli	0	8	86	91	14	1	0	0	0	0	0	0	*
Cooked Greens	0	0	89	91	11	4	0	3	0	1	0	1	
Raw Carrots	0	0	61	88	36	4	0	1	0	3	3	4	*
Raw Green Pepper	0	0	53	86	33	9	6	1	3	0	6	4	*
French Fries	0	0	81	83	17	8	0	3	0	1	3	5	
Bkd. Potato	0	0	92	92	8	4	0	3	0	1	0	0	
Apple	0	0	92	91	6	1	0	1	0	3	3	4	
Or[illegible]	0	0	94	91	3	0	0	1	0	1	3	6	
Peach	0	0	89	91	8	1	0	1	0	3	3	4	
Cnd. Peaches	0	0	89	95	8	4	0	0	0	0	3	1	
Orange Juice	0	0	92	97	3	3	3	0	0	0	3	0	
W. W. Bread	0	0	83	91	17	4	0	1	0	1	0	3	
Oatmeal	0	0	59	82	25	6	0	0	0	4	17	8	*
Brown Rice	0	0	72	92	19	0	6	4	3	4	0	0	*
Spaghetti	0	0	86	91	11	1	0	3	0	4	3	1	
Peanut Butter	0	0	69	91	25	8	0	0	0	0	6	1	*
Baked Beans	0	0	58	90	39	10	0	0	0	0	3	0	*
Split Pea Soup	0	0	42	87	44	8	3	1	0	1	11	3	*
Skim Milk	0	0	36	19	47	9	6	0	0	70	11	1	*
Regular Milk	0	0	61	88	36	9	0	0	0	0	3	3	*
Cottage Cheese	0	0	53	87	31	8	0	0	0	1	17	4	*
Piece of Cheese	0	0	97	97	3	1	0	0	0	1	0	0	
Plain Popcorn	0	0	67	95	28	4	3	0	3	0	0	1	*
Rice Pudding	0	0	78	90	17	6	0	0	0	0	6	4	
Banana Nut Brd.	0	0	81	99	11	0	3	1	3	0	3	0	*
Bran Muffin	0	0	72	95	17	1	6	1	3	0	3	3	*

* Indicates statistical significance was found between pre-test and post-test results

Table 6

Results of Food Attitude Survey

Students

Food	No Response		Percent of Persons Responding to Distractor										Stat. Sig.
			A		B		C		D		E		
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	
Rst. Chicken	10	0	57	59	19	32	8	3	2	3	4	3	*
Hamburger	10	1	74	93	9	5	1	0	4	0	0	1	*
Broiled Fish	10	1	15	9	17	35	17	14	13	16	28	25	*
Tuna Fish	18	26	58	55	15	13	2	2	2	1	6	4	*
Cooked Broccoli	17	26	29	27	14	13	10	4	9	7	21	22	*
Cooked Greens	10	1	42	50	21	22	9	9	5	9	12	11	*
Raw Carrots	11	0	33	35	21	27	5	10	7	8	22	20	*
Raw Green Pepper	11	1	13	11	10	17	10	10	16	19	39	43	*
French Fries	12	1	72	72	5	7	4	4	5	12	2	5	*
Bkd. Potato	13	1	60	67	13	22	6	5	4	3	4	3	*
Apple	15	1	67	70	10	13	5	8	1	6	2	3	*
Orange	13	1	69	70	9	4	4	3	4	11	1	11	*
Plum	14	1	64	64	11	11	4	8	3	9	4	8	*
Cnd. Peaches	14	1	61	67	13	20	4	5	1	3	7	5	*
Orange Juice	14	1	70	73	8	11	3	9	3	4	1	2	*
W. W. Bread	14	1	39	37	18	31	14	9	8	9	7	13	*
Oatmeal	14	1	41	44	22	26	5	6	3	4	14	19	*
Brown Rice	15	1	25	24	10	14	23	18	12	13	15	29	*
Spaghetti	14	1	65	63	9	10	4	3	3	6	4	18	*
Peanut Butter	14	1	55	60	18	27	5	4	3	2	5	6	*
Baked Beans	14	1	25	34	27	30	7	8	7	7	21	20	*
Split Pea Soup	14	1	12	17	9	15	17	17	18	15	30	35	*
Skim Milk	16	1	12	16	19	25	12	11	12	13	29	34	*
Regular Milk	15	1	63	70	12	15	3	7	4	2	4	5	*
Cottage Cheese	17	1	14	30	16	15	15	12	11	9	27	33	*
Piece of Cheese	15	1	60	71	15	18	3	3	2	2	5	6	*
Plain Popcorn	16	1	53	71	20	19	5	2	2	1	4	5	*
Rice Pudding	16	1	44	45	12	14	8	12	8	9	12	20	*
Banana Nut Brd.	16	1	19	35	9	10	20	23	14	12	22	19	*
Bran Muffin	16	1	32	39	11	17	19	15	10	8	12	20	*

* Indicates statistical significance was found between pre-test and post-test results.

6. Discussion and Implications

Nutrition opinions and food attitudes changed with exposure to educational programming. Caution must be exerted in the interpretation of these changes, however. Neither opinions nor food attitudes are indicative of eating habits. Difficulties in interpreting changes in opinions and habits are further compounded by the findings of nutrition research: people have a tendency to respond in accord with what they believe to be accurate on any dietary recall methodology and/or attitudinal survey. This may account for responses to item #5 on the opinions survey. Nearly 20% more adults and 10% more students agreed on the post-test that they liked between meal snacks. Many adults however, reported eating less foods containing sugar, salt, and/or fat. Perhaps instruction lead to a realization that snacking per se was not the problem; rather, what is eaten is the major concern.

Heightened awareness of nutritional concerns is likely to account for several changes in nutrition opinions. Item 11 on the "Opinions Survey" indicated that more adults and students found foods advertised on TV as more tempting on the post-test. Training workshops and curricular content stressed the subliminal effects of food advertising. Responses might indicate that students and adults became more consciously aware of media campaigns.

One of the most dramatic changes in opinion was regarding the use of salt in the diet. Whereas 50% disagreed on the pre-test that adding salt improves taste, 83% agreed on the post-test. However, the majority of teachers responding to the evaluation forms indicated that they had deliberately cut back on their intake of sodium. The opinions response may indicate that adults miss the flavor.

Teaching methodologies may have influenced students' opinions regarding the school food service program. A statistically significant change in a positive direction was noted on the post-test. On the evaluation forms, many teachers indicated cooperative teaching ventures involving the cafeteria staff.

When taken together, the Food Attitude Survey and behavioral responses, indicate some very positive changes. Teachers reported increasing fiber and dairy products, and decreasing fat and/or meal intake. The attitude survey indicated statistically significant changes in foods high in fiber: oatmeal, brown rice, bran muffins, banana nut breads, raw carrots, raw green peppers. Many of these foods were also served during nutrition breaks at the workshops. As familiarity with foods breeds preference, these changes are not surprising. Statistically significant positive changes in food attitudes were also evidenced in relation to alternative protein sources (split pea soup, baked beans, and peanut butter); and in relationship to dairy products (cottage cheese, regular milk).

J. RECOMMENDATIONS

In light of project termination and the results of the NET testing, the following recommendations are made:

1. Subject area coordinators should examine areas in which students are having problems and seek to incorporate these in future curriculum planning. The Maryland State Department of Education, NET Program should offer assistance.

2. Instructional materials distributed with the guides should be placed on the BCPS AR lists by the subject area offices. Teachers reported that they needed more materials.

3. The inservice course, "Teaching Nutrition K-12, An Interdisciplinary Approach," should be continued. The requests for and results of this course are overwhelming. This course should be used as a vehicle to highlight the areas where teachers are having problems. This is particularly important as nutrition is a part of the BCPS curricula from grades K-12.

4. As students consistently have problems with issues involving food fads, lessons appropriate to the various curricula, specifically health and home economics, should be incorporated into the guides. The fact that such lessons were a part of the science guide is evidenced by the testing results.

5. Health: A one day training program on basic nutrition should be implemented for teachers of health. The NET Program concentrated too much on a specific area of nutrition expertise.

Teachers felt that all curriculum worksheets and puzzles should include the answers.

6. Home Economics: The majority of teachers reported that a guide for DEC students needs to be developed. This could easily be accomplished by revising the existing guide.

Data for home economics needs to be rerun without the DEC population which was targeted by the Project Facilitator. If this fails to answer questions regarding the low testing results of home economics students, the field test teachers need to be recalled and questioned regarding actual events, as the guide was designed to answer many of the issues that presented problems.

IV NET EVALUATION FORMAT

Target Group	Objectives	Method and Activity	Frequency/ Duration	Source Documents	Materials Used to Reinforce Concepts
Teachers Cafeteria Managers	To implement the accredited inservice course, "An Inter-disciplinary Apprach to Teaching Nutrition K-12," developed as part of the fiscal year 1980 project.	1. See developmental sequence in FY '80 Final Report. 2. Advertise to teachers in the Staff Newsletter. 3. Letter drafted to Cafeteria Managers and circulated through the school food service division. 4. Teachers Pre-tested on first night. Course taught. Teachers post-tested on last night. Activity Logs maintained throughout the year.	Sept. 1981-Dec. 1982 again Feb. 1982-May 1982	Inservice forms and paperwork Staff Newsletter Evaluation forms Attendance records Consultants' forms	Correspondence with Office of Staff Development Instructional materials Concepts Curricula

Did Change Occur?	What things other than this project could have caused this change?	Was the effect consistent/frequent enough to have impact on classroom and cafeteria?	Did the effect have educational importance?	Comments
Yes, change occurred. Coordination & Cooperation: Most of the final projects from the inservice course were designed as cooperative ventures between school food service, parents, and teachers. Instructional Approach: On evaluation forms, most teachers reported they now taught nutrition utilizing a nutrient approach. Also most projects were interdisciplinary. Behavioral Changes: -40% cut down on salt -33% cut down on sugar -40% cut down on fats and/or meat intake -20% eat or drink more dairy products -15% increased fiber	NET intervention provided the opportunity for school food service personnel and teachers to openly exchange ideas. This accounted for more open communication than existed prior to project intervention. Increased national interest may have accounted for some changes. Teachers and cafeteria managers participated in the course due to their interest. All participants claimed behavioral changes were the result of the course. However, nutrition research indicates that on any dietary recall methodology and/or attitudinal survey, people often respond in accord to what they know to be an acceptable response. This is unlikely when all test results are examined. (See "Results," Section I).	Yes. Most participants requested another course. Several teachers signed up for summer nutrition courses at Towson State University. All reported more time spent in the classroom on nutrition. Both semesters more people registered for the course than could be handled. Many inservice participants were from schools where NET had conducted faculty programs.	Yes. Staff development programs are a major vehicle for gaining knowledge and improving instructional competence. It is more likely that fewer nutrition myths will be promoted in the classroom. Some research indicates that a strict adherence to the Basic Four approach to nutrition education may hinder behavioral change. It has been suggested in the literature that a nutrient approach to teaching may promote more changes in dietary habits. The fact that participants report spending more time on nutrition in the classroom is highly significant. It is obvious that teachers consider nutrition a priority. The fact that teachers have changed their food habits is important in their ability to help others. All behavioral changes are in line with the U.S. Dietary Goals.	The inservice course should continue to be funded.

IV NET EVALUATION FORMAT continued

Target Group	Objectives	Method and Activity	Frequency/ Duration	Source Documents	Materials Used to Reinforce Concepts
Secondary Teachers of Home Economics, Health, and Science Secondary Students	In cooperation with subject area coordinators, to publish the objectives and learning activities developed during the fiscal years 1979 and 1980 projects as an integral component of the curriculum guide of health, home economics, & science. To hold curriculum implementation workshops for secondary teachers of home economics, health, and science.	1. See fiscal year 1979 Final Report and Section F, "Product Development" of this report for initial steps. 2. Plan implementation workshops with each subject area coordinator. 3. Training workshops held. Teachers pre-tested. 4. Students pre-tested prior to instruction. (Specific dates established for each discipline.) 5. Nutrition units taught. Students and teachers post-tested. Test data returned along with teachers' evaluations of curricula. 6. Analysis of data by BCPS Data Center, Office of Testing and Evaluation and NET Project Facilitator.	1979-1980 Nov. 11, '81 Feb. 10, '82 Mar. 1, '82 Approximately 6 weeks 1 month	Scope & Sequence Chart Curriculum Guides Correspondence with Coordinators Educational Leave Forms Data Analysis Print Outs	Project Proposal White House Conference Concepts Notebooks which included curriculum guide and instructional materials Workshop objectives and Programs

Did Change Occur?	What things other than this project could have or might have caused this change?	Was the effect consistent/frequent enough to have impact on classroom and cafeteria?	Did the effect have educational importance?	Comments
Yes, change occurred. Curricula: The nutrition component of secondary health, home economics, and science have been updated and revised in light of White House Conference Concepts. A scope and sequence chart for nutrition education in the BCPS has been developed. Teachers have been trained and all field test teachers indicate that the new guides will be used often. For full explanation of changes evidenced in testing of teachers and students, see section, "Results".	Project intervention accounts for changes in the curricula. The significance of some test results may be a function of population size. After participating in nutrition instruction teachers and/or students may have responded in accord with what they knew to be appropriate. Nutrition research indicates that this effect is a problem with any dietary recall methodology and/or attitudinal survey. All results taken together, indicate very positive changes occurred.	Yes. All field test teachers indicated that they will continue to use the curriculum guides. A minimum of five teachers enrolled in the various NET programs this year have signed up for further study at local colleges.	Yes. It is anticipated that the use of these curriculum guides will influence the nutrition knowledge of students. As research indicates that students become bored and "turn off" when taught the same thing year after year, this effort to coordinate the nutrition efforts of the various disciplines, alleviating gaps and overlaps will have a profound impact on educational endeavors. The testing highlighted areas that need further attention.	

IV NET EVALUATION FORMAT continued

Target Group	Objectives	Method and Activity	Frequency/ Duration	Source Documents	Materials Used to Reinforce Concepts
Elementary Teachers Cafeteria Managers	To expand staff development programs on nutrition with the instructional and school food service staff at individual public elementary schools.	1. Rewrite circular on NET services used FY '80 Project. Disseminate to all schools through BCPS channels.	Oct. 1981	Circular Workshop Registration Forms Activity Logs	Dissemination of Instructional Materials for each Lesson NET Training Manual "Nutrition Lessons for Elementary Students" developed by BCPS NET Project, FY '80.
		2. Workshops scheduled as requested. Minimum of 3 hrs. at each school required.	Approximately Once a month		
		3. Newsletter sent to all schools (including secondary) with teaching strategies for Dental Health Month, Nutrition Month and Breakfast Week.	February 1982		
		4. Memos to schools requesting return of Activity Logs.	May 1982		

Did Change Occur?	What things other than this project could have or might have caused this change?	Was the effect consistent/frequent enough to have impact on classroom and cafeteria?	Did the effect have educational importance?	Comments
Yes, change occurred. Numerous training workshops were requested for teachers and cafeteria managers throughout the year. The staffs at 10 schools were reached.	The fact that the elementary lessons were correlated to Project Basic was of assistance in scheduling workshops. Schools were required to hold one training session on the Project Basic competencies. As nutrition is a part of the elementary health curriculum, a desire to increase teacher competence may account for some requests.	Yes. Correspondence and quarterly report figures from project schools of the FY '79 and '80 indicate that nutrition is still a high priority.	Yes. As indicated above, staff development programs represent a major vehicle for transmitting knowledge and developing instructional competence. Nutrition represents a major segment of the health curriculum. It can be assumed that these sessions have upgraded teachers' skills in teaching the content.	Due to funding cuts, this objective was not actively pursued.

IV NET EVALUATION FORMAT continued

Target Group	Objectives	Method and Activity	Frequency/ Duration	Source Documents	Materials Used to Reinforce Concepts
Parent/ Community Groups	To continue parent/ community nutrition programs that are designed to disseminate information and to promote the nutrition efforts of the schools.	1. Circular to schools outlining NET services to parent groups.	Oct. 1981	Circular Workshop registration forms	MSDE brochure, Nutrition Education and Training Program. Instructional Materials
		2. Parent/community workshops conducted upon request. Each program developed around the needs of the group.	One every other month	Letters of Appreciation	
		3. Booth on NET Project in Hopkins Plaza during Home Economics Fair.	May 1982		

Did Change Occur?	What things other than this project could have or might have caused this change?	Was the effect consistent/frequent enough to have impact on classroom and cafeteria?	Did the effect have educational importance?	Comments
Yes, change occurred. As in previous years, the requests for NET services exceeded the ability of the staff to respond.	Awareness of consultants available to conduct nutrition programs may have accounted for the number of workshops scheduled. However, without NET intervention this would not have occurred on such a scale.	Although the requests exceeded the staff's ability to respond, it is impossible to determine the impact on the classroom and cafeteria. Numerous parents were involved in classroom activities throughout the system, as reported on Activity Logs. As parents normally serve as the "gatekeepers" of the family food supply, and as parents participated in school nutrition efforts, it is likely that the parent programs had a very positive effect.	Yes. The primary goal of nutrition education is improved nutritional status which to a large degree depends on parental habits.	Due to the inevitable funding cuts and the need to complete the curricula, this objective held a very low priority.

BALTIMORE CITY PUBLIC SCHOOLS

NUTRITION EDUCATION AND TRAINING PROGRAM

V. PARTICIPATION REPORT**

	PUBLIC SCHOOLS	PRIVATE SCHOOLS
PART I - CHILDREN		
Estimated Number of Children to be Reached		
Number of Children Receiving Nutrition Instruction	22,098	904
PART II - TEACHERS		
Number of Teachers Receiving Nutrition Instruction Through Accredited College Courses	5 involved in NET Project	2 Md. School for the Blind
Number of Teachers Receiving Nutrition Instruction Through Inservice/Seminars and other means.	975	62
PART III - FOODSERVICE PERSONNEL		
Number Receiving Nutrition through Accredited College Courses	2	0 N/A
Number Receiving Nutrition Instruction Through Inservice/Seminars and other means.	117	0 N/A
PART IV - PARENT TRAINING		
Parents Receiving Training Through Workshops	654	N/A

** Within the three years of the NET project these totals have been reached. At least one teacher from all but 2 of the city's 55 secondary schools have received training. 42% of the city's elementary schools have been reached with seminars/inservice programming.

BALTIMORE CITY PUBLIC SCHOOLS

NUTRITION EDUCATION AND TRAINING PROGRAM

VI. PROJECT EXPENDITURES

1.	Staff Development and Curriculum Development*	$ 20,665
2.	Transportation of Students for the Program	$ -----
3.	Employee Retirement, Social Security and Other Employee Benefits	$ 2,600
4.	Travel Costs For the Staff	$ 218
5.	Food Service Costs	$ 276
6.	Other (Specify) Secretary Supplies, Office and Expendible Telephone	$ 1,641
	TOTAL	$ 25,400

*Includes: Facilitator Salary, Consultants; Instructional Materials; Substitute Teacher Payments; Printing & Duplication

NOTE: These figures were based on records maintained by the Project Facilitator and may not accurately reflect the final expenditures. A complete and accurate accounting will be forwarded to Ms. Hilda Manning, Specialist, Food and Nutrition Branch, Maryland State Department of Education in late October 1981.

APPENDIX

PILOT SCHOOLS AND FIELD TEST TEACHERS

SENIOR HIGH LEVEL

School Name	Number	Science Teachers	Health Teachers
Carroll Park Senior High	09		Gaines Price
Lake Clifton Senior High	40	Bernadette Stundick	Robert Myrncza *
Southern Senior High	70	Mary Ward	Sharon Atkinson
Venable Senior High	115		Constance Haywood
George W. F. McMechan Jr./Sr.	177		Christine Webster
Francis M. Wood Senior High	178		Helen Robinson
Edmondson Senior High	400	Mildred Harris	
Northwestern Senior High	401	Robert Younger	
Northern Senior High	402		Lyon Harrison Carey
Baltimore Polytechnic Institute	403	William Curtis Eldridge	
Eastern Senior High	404		Birute Gorrel *
Patterson Senior High	405	Clarissa B. Evans	Donna Alford
Forest Park Senior High	406	Alice Boyd	Lois Brown
Western Senior High	407	Michael Spatzer	Mike Fuka
Mergenthaler Voc-Tech Senior	410		Denise Foster
Walbrook Senior High	411	Reginald Harris	Marian Finney *
Southwestern Senior High	412	Sarah Levine	Denise Gordon *
Paul Laurence Dunbar Senior High	414		Gail Marchand *
Frederick Douglass Senior High	450		Joann Christopher *
Joseph C. Briscoe Senior High	451		Alice Watson
Fairmount Hill Vocational High	453		Valerie McIntyre
Carver Voc-Tech Senior	454		Arlene Buchman
Calvert Educational Center	456		Benjamin Jackson
Laurence G. Paquin Jr./Sr. High	457	Evelyn L. Wheeler-Hall	Harris Miller

* Field Test Teachers

PILOT SCHOOLS AND FIELD TEST TEACHERS

JUNIOR/MIDDLE LEVEL

School Name	Number	Science Teachers	Home Economics Teachers
Lakeland Elementary/Middle	12	Ella Jay Parfitt-Dahl *	Hazel Scott *
Hamilton Junior High	41	Margaret Miller	Helen Tennant *
Garrison Junior High	42	Elizabeth Paige	Maxine Robertson *
Chinquapin Middle	46	Frank Brown *	Ruth Brown *
Northeast Middle	49		Wanda Davis *
Robert Poole Junior High	56		Zippora Friedman
Lombard Junior High	57		Doretha Carr *
Mt. Royal Elementary/Middle	66	Joanne Kandell	
Calverton Junior High	75	Ruth F. Andrione *	Helen Harden *
Francis Scott Key Elem. & Junior	76		Rozelle Wiggins
Herring Run Junior High	77	Jannie Mae McKnight *	Betty Mello *
Harlem Park Junior High	78	Priscilla Tilley *	Mary Thorpe
William H. Lemmel Junior High	79	Karen Robinson	Gladys Burrell
West Baltimore Middle	80	Trezeline Brooks*	Jocelyn Trammell *
Greenspring Junior High	82		Hester Patterson *
Clifton Park Junior High	90	Pathenia Barnes	
Gwynns Falls Park Junior High	91	George Moore	Mary Eastman
Northern Parkway Junior High	93	Nalini Karunakar	
Booker T. Washington Junior High	130	Marilyn Williams	Nannie Garrett *
Diggs-Johnson Junior High	162		Marion Taylor *
Cherry Hill Junior High	180		Cynthia Pool
Winston Middle	209	Yolanda Hendricks	Charlene Williamson *
Pimlico Junior High	222	Margaret Carey *	Adele Harris
Canton Elementary & Junior High	230		Darlene Lyles *
Roland Park Junior High	233	Sally Mays Kutzer	Doris Larson
Benjamin Franklin Junior High	239	Christine Showrunski	Joanne Chambers
Fallstaff Middle	241		Teresa Goodman
Southeast Middle	255		Mary Carter

* Field Test Teachers

HOME ECONOMICS CURRICULUM IMPLEMENTATION WORKSHOP

November 11, 1981

8:30 - 8:45	Welcome Ann Boone, Specialist Office of Home Economics
8:45 - 9:10	Pre-Testing
9:10 - 10:10	Food Patterns Today Ms. Agatha Rider, Assistant Professor Department of Biochemistry Johns Hopkins University
10:10 - 10:30	Nutrition Break
10:30 - 11:30	Sugar, Salt, and Fat Mrs. Hilda Manning, Specialist Food and Nutrition Branch Maryland State Department of Education
11:30 - 12:30	Nutrition and the Curriculum Ms. Linda J. Collis, NET Facilitator Office of Home Economics
12:30 - 1:30	Lunch
1:30 - 2:30	Nutrition and the Curriculum continued
2:30 - 3:00	Resources...Food Your Choice Ms. Debbie Doxzon Nutrition Consultant Dairy Council of the Upper Chesapeake Bay, Inc.
3:00 - 3:30	Sharing Expectations

Baltimore City Public Schools

Nutrition Education and Training Project

Health Education Curriculum Implementation Workshop

February 10, 1982

8:30 - 9:00	Registration
9:00 - 9:30	Introductions Welcome Hilda Manning, State Coordinator Nutrition Education & Training Program Maryland State Department of Education
9:30 - 10:15	Testing Nutrition Break
10:15 - 12:00	Fat Control Jack Osman, Ph.D., Professor Towson State University
12:00 - 1:00	Lunch
1:00 - 2:00	Nutrition and Heart Disease Dr. David Levine, Cardiologist Johns Hopkins Hospital Dr. Elijah Saunders, Director of Cardiology Provident Hospital Chairperson, MD. State High Blood Pressure Council
2:00 - 3:00	A Look at the Curriculum Linda J. Collis, Facilitator Nutrition Education and Training Program
3:00 - 3:30	Food...Your Choice Debbie Doxzon Nutrition Consultant Dairy Council of the Upper Chesapeake Bay, Inc.
3:30 - 4:30	Nutrition and Cancer Dr. Richard Ahrens, Professor University of Maryland
4:30	Closing

Baltimore City Public Schools

Nutrition Education and Training Program

Science Curriculum Implementation Workshop

March 1, 1982

8:15 - 8:30	Registration
8:30 - 9:15	Welcome Testing
9:15 - 10:15	Current Concepts in Human Nutrition & Metabolism Ernest J. Plata, Ph.D. Assistant Chief Laboratory of Viral Carcinogenesis, Division of Cancer Cause and Prevention National Cancer Institute
10:15 - 10:35	Nutrition Break
10:35 - 12:00	Current Concepts (continued)
12:00 - 12:45	Lunch
12:45 - 2:00	Nutrition Myths & Mania Linda J. Collis, Facilitator Nutrition Education & Training Program
2:00 - 3:00	Fat Control Jack Osman, Ph.D. Professor, Health Sciences Towson State University
3:00 - 4:00	A Look At the Curriculum & Resources Linda J. Collis Food...Your Choice Debbie Doxzon Nutrition Consultant Dairy Council of the Upper Cheasepeake Bay, Inc.

Nutrition Education and Training Program

Baltimore City Public School

School #410

396-6493

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BALTIMORE CITY PUBLIC SCHOOLS
BALTIMORE, MARYLAND 21218
Office of
The Superintendent of Public Instruction

Circular No.
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NUTRITION AND PHYSICAL FITNESS

TO: Regional Superintendents, Principals and Heads of Central Office Units

FROM: John L. Crew, Sr., Superintendent of Public Instruction
Virginia Roeder, Deputy Superintendent of Public Instruction
Lloyd M. Alston, Assistant Superintendent, Division of Vocational Education

In conjunction with National Nutrition Month in March, the Maryland Dietetic Association is hosting a "Nutrific Fitness Event" to be held on Sunday, March 21, 1982 (Rain date - April 14th) from 10:00 a.m. to 3:00 p.m. at Herring Run Park. The park is located off Argonne Drive and Harford Road.

The goals of the event are:

1. To promote good nutrition and physical fitness as essential elements for general health.
2. To encourage good eating habits through an understanding of energy and nutrient needs.
3. To encourage physical fitness through regular exercise.

The event provides an opportunity for school children and/or faculty who register to:

1. Walk, jog, or run a 3-mile vita-course that includes exercise stations with helpful hints on nutrition and physical performance.
2. Discuss with Registered Dietitians, who are qualified nutrition professionals, issues pertaining to nutrition and its role in physical performance and health.
3. Obtain a Nutrition and Physical Performance Information Packet.
4. Obtain information on proper clothing for athletic activities.
5. Participate in professionally-led warm-up exercises.
6. Win prizes:
   a. "Nutrific Fitness" visor upon completion of the vita-course.
   b. Valuable prize for greatest number of participants from a school or community group.

This program is endorsed by the Maryland Physical Fitness Commission. Children under 12 should be accompanied by an adult. Registration forms are available from the Nutrition Education & Training Program, Baltimore City Public Schools. Call Linda Collis on 396-6493.

LJC:ch